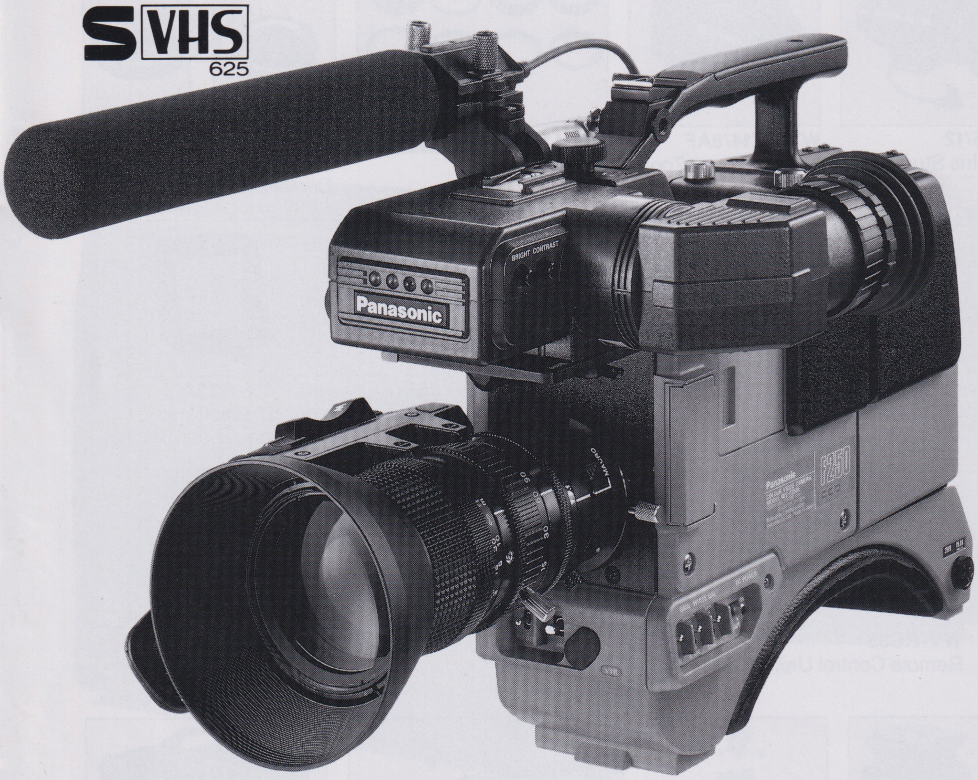
WV-F250 3-CCD Colour Video Camera



- 3-CCD pick-up image sensors (400,000 picture elements with a high precision F1.4 prism)
- Variable speed electronic shutter (1/250, 1/500, 1/1,000 sec)
- Y/C separation output circuit
- 1.5″ electronic viewfinder
- −6dB switch for fine gain adjustment
- Rugged aluminium die-cast chassis
- Genlock capability
- VTR start switch
- Versatile connectability (S-VHS, VHS, Beta, 3/4″, MII, and Betacam*)
- Studio configuration (with options)

Specifications

Power Source: 12V DC, 5 sources as follows;
(1) Battery pack
(2) AC Adaptor
(3) External DC source through 4-pin DC connector
(4) VTR (external AC adaptor)
(5) Remote control unit through VTR/RCU connector

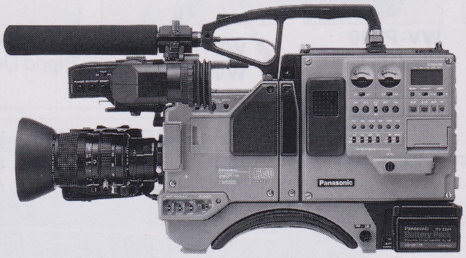
Power Consumption:
Camera head only; 15.6W (12V DC, 1.3A)
ENG Configuration; 18W (12V DC, 1.5A)

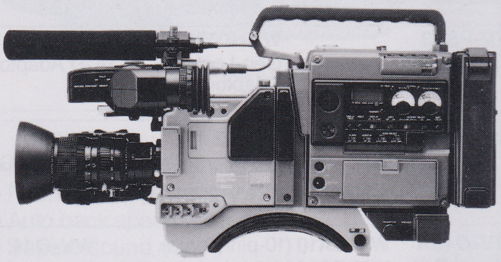
Dimensions: Camera head (WV-F250H) only;
146(W) × 262(H) × 170(D) mm
ENG Configuration;
240(W) × 300(H) × 500(D) mm
Studio Configuration;
183(W) × 475(H) × 570(D) mm

Weight: Camera head only; Approx. 2.5kg
ENG Configuration; Approx. 7.3kg

Picture Elements: 681(H) × 582(V) mm

S-VHS Camera/Recorder System


MII Camera/Recorder System

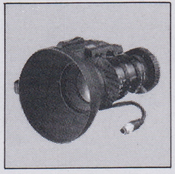

Betacam* Camera/Recorder System

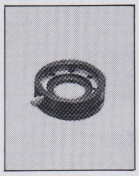
- **For WV-F200A & WV-250**

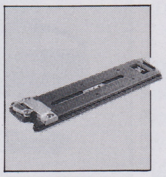
WV-MC35
Condenser Microphone

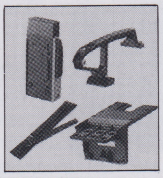
WV-CA32A/26 (3m)
VTR Cable
(for MII VTRs)

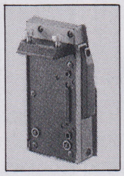
- **For WV-F250**


S12x 7.5BRM
12x Zoom Lens


WV-LC25
2/3″ Bayonet Mount Adaptor

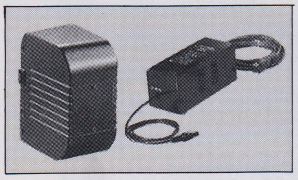

WV-QT70
Tripod Mounting Adaptor


WV-VT15
MII Dockable Kit

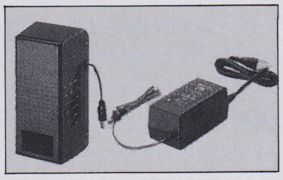

WV-VT16
Betacam* Adaptor

WV-CC71A
Carrying Case

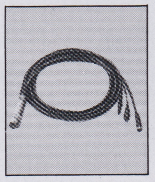
- **For All**

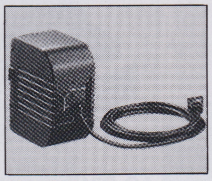

WV-PS33
Battery Pack
(3.5AH)

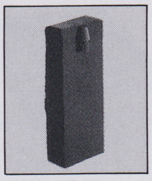
WV-BC30
Battery Charger


WV-PS60
Battery Pack
(1.65AH)

DE-1232
Battery Charger


WV-CA38
S-VHS Cable


WV-PS31
AC Adaptor/
Quick Charger


WV-AD19
Battery Adaptor
(for AG-BP212)

AG-B640
AC Adaptor/Battery Charger
(for AG-BP212)

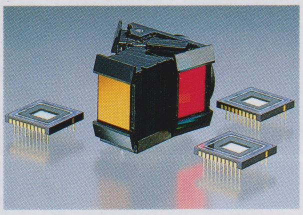
4E-10
4-Pin
Power
Cable

Panasonic
Professional Video Systems

WV-F250
3-CCD Colour Video Camera

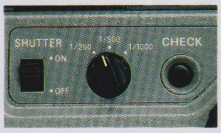
Panasonic
BRIGHT CONTRAST
F250
Panasonic
GAIN
WHITE BAL
DC POWER

3CCD is the Secret to High Resolution and High Picture Quality



The Panasonic F250 Colour Video Camera combines a high precision F1.4 prism and a 400,000 picture-element CCD. Its spatial picture-element offset signal processing with original Panasonic prism assembly and circuitry make the Colour Video Camera able to display a resolution as high as 650 lines. The minimal object illumination requirement of 30 lux (F1.4 +18 dB) and the high signal-to-noise ratio of 60 dB (typical) ensure that you can shoot with the sharpness of a professional at any occasion. The 3CCD-RGB system provides high image stability and a colour reproduction that is true to the original. Therefore, high sensitivity is obtained without sticking and residual images, without having to go through any registration or centering adjustment procedures. This F250 Camera is not affected by geomagnetism. And it has been carefully designed and engineered to make it insensitive to vibrations and shocks. The F250 will surely prove to be a very reliable partner even in the demanding field work of the professional.

Variable Electronic Shutter



The F250 is provided with an electronic shutter with speeds of 1/250, 1/500 and 1/1,000 second. Using these settings you can record high-speed events such as various types of sports, or go out in the woods to capture wildlife pictures that have been available to you only through TV-monitor till now.

Y/C Separation Output Circuit

The F250 has separate Y (luminance) and C (chrominance) outputs for direct S-VHS compatibility, displaying the exceptional high-quality playback of S-VHS. And it connects directly with the Panasonic portable S-VHS Video Tape Recorder AG-7450, offers high picture quality and outstanding all-around video performance on a professional level.

1.5″ Electronic Viewfinder

The 1.5″ viewfinder of F250 allows left/right, forward/backward and tilting adjustment to make your shooting easier. All you have to do is to find the setting you find most comfortable. This quick-start viewfinder lets you skip unnecessary standby operations.

Viewfinder Display

Function Indicated	Method of Display	When Displayed			
		Always	Check Mode	During Operation	As Alarm
MIC/playback sound level	Charac-ters/ Symbols	●	●		
Filter No and data			●		
Electronic shutter			●	●	
Battery voltage		●	●		
Gain			●	●	
Auto operation				●	
AWC memory status			●	●	
Detail SW			●	●	

Function Indicated	Method of Display	When Displayed			
		Always	Check Mode	During Operation	As Alarm
Recording time integration	Charac-ters/ Symbols		●		
Memory backup		●	●		●
Auto iris setting			●		
REC tally/VTR alarm	LED Indica-tors			●	●
High gain				●	
Battery alarm					●
AWC/ABC auto set memory				●	●
Electronic shutter				●	

−6dB Switch for Fine Gain Adjustment

The −6dB switch on F250 Permits conventional gain settings of 0dB, +9dB and +18dB, plus combinations for −6dB, +3dB and +12dB.

Rugged Aluminium Die-cast Chassis

A sturdy aluminium die-cast body is resistant to shocks, and that's why the F250 is the ideal machine for outdoor video filming, including ENG/EFP.

Genlock Capability

The Genlock circuit permits external sync locking by using either a composite or black burst signal. Adjustment of the Genlock subcarrier horizontal phase can easily be made at the side pocket.

VTR Start Switch

The camera has two VTR start switches, one on the lens and the other on the camera.

Versatile Connectability

The F250 easily connects to several types of VTR's, including S-VHS, VHS, Beta, 3/4″, MII and Betacam models. Connection can be easily mode from the outside.

Studio Configuration (with Options)

By using the optional WV-RC36/WV-RC37 Digital Camera Control Unit, the F250 readily becomes a studio camera or a remotely controlled stationary camera.

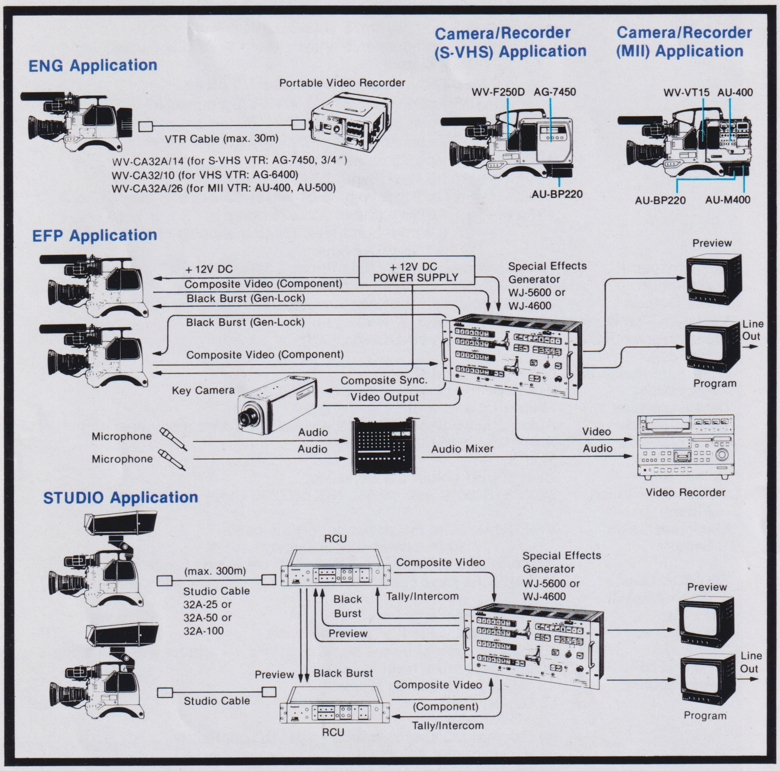
Additional Features

EBU Standard Colour Bars with Date/Time Display
Two-setting White Balance Memory
Auto Black Balance
Colour Matrix Masking Circuit
Flare Correction Circuit
Iris 1/2 Open/Close Switch

BRIGHT CONTRAST
LENS-JAPAN
MACRO
GAIN

WV-F250
3-CCD Colour Video Camera

SYSTEM DIAGRAMS


ENG Application
Portable Video Recorder
VTR Cable (max. 30m)
WV-CA32A/14 (for S-VHS VTR: AG-7450, 3/4")
WV-CA32/10 (for VHS VTR: AG-6400)
WV-CA32A/26 (for MII VTR: AU-400, AU-500)
Camera/Recorder (S-VHS) Application
WV-F250D
AG-7450
AU-BP220
Camera/Recorder (MII) Application
WV-VT15
AU-400
AU-BP220
AU-M400
EFP Application
+12V DC
Composite Video (Component)
Black Burst (Gen-Lock)
+12V DC POWER SUPPLY
Special Effects Generator WJ-5600 or WJ-4600
Black Burst (Gen-Lock)
Composite Video (Component)
Key Camera
Composite Sync.
Video Output
Preview
Line Out
Program
Microphone
Microphone
Audio
Audio
Audio Mixer
Video
Audio
Video Recorder
STUDIO Application
RCU
(max. 300m)
Studio Cable 32A-25 or 32A-50 or 32A-100
Composite Video
Black Burst
Tally/Intercom
Preview
Special Effects Generator WJ-5600 or WJ-4600
Preview
Line Out
Program
Preview
Black Burst
Studio Cable
Composite Video
(Component)
Tally/Intercom
RCU

AG-7450 S-VHS Portable Video Tape Recorder

Superior Picture Quality, S-VHS and Amorphous Video Heads

The S-VHS format offers advanced video performance, including a higher-frequency luminance signal which realizes a horizontal resolution of more than 400 lines. The AG-7450 also has Panasonic's unique amorphous video heads which are identical to those in MII broadcast VTRs. These heads ensure high output and superior high-frequency characteristics.

Versatile, Independent and Portable

The AG-7450 can be used as a professional-quality standalone portable VTR by connecting it to the AG-S745 VTR Adapter. This adaptor has a standard 14-pin camera connector and a Y/C separation circuit. With an S-Video (4-pin) In/Out terminal, BNC Video In, a 5-pin remote control terminal and a Synchro Edit terminal, it allows for system expansion and a wide variety of system configurations for both dubbing and editing.

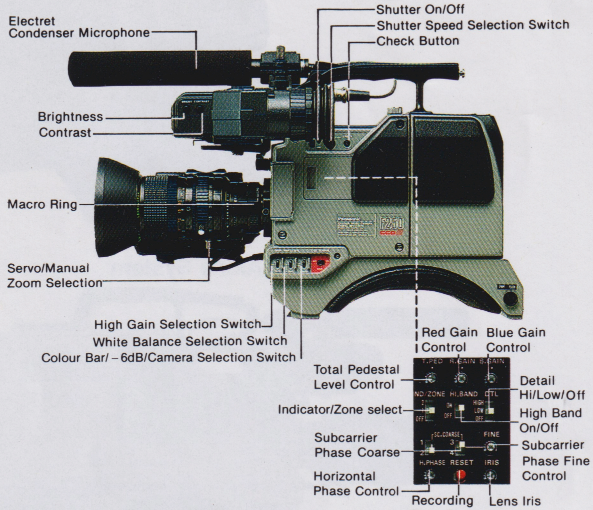
Additional Features

- Superb 4-channel Audio with Dolby* NR.
- Two DD reel motors and a anti-rolling mechanism are used to obtain low noise and high reliability.
- Time Code Recording/Playback Capability with AG-F745
- Rotary erase head and auto backspace function for clear assembly recording
- Linear tape counter with hour, minute, second display and battery back-up
- External power input terminal (4-pin XLR)
- Half-loading system

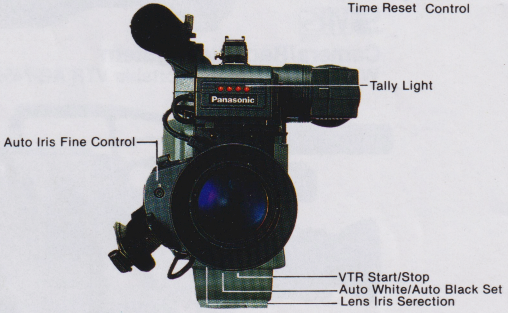
BACK LIGHT OFF ON
MEMORY RESET
AUDIO SELECT
NORM Hi-Fi
AUDIO LEVEL
NORM CH1 Hi-Fi
NORM CH2 Hi-Fi
DOLBY SYSTEM
Panasonic
COLOUR VIDEO CAMERA MODEL WV-F250E
F250
CCD
Panasonic
AG-7450
Portable Video Cassette Recorder
GAIN WHITE BAL DC POWER
OFF ON
SAVE
Panasonic 12V 2.2Ah
Battery Pack
Matsushita Electric Industrial Co., Ltd.
AU-BP220
Made in Japan

WV-F250 Camera/Recorder System (shown with optional S-VHS portable VTR AG-7450)

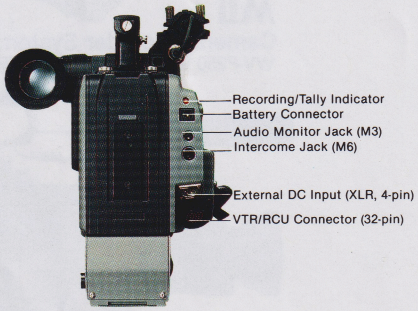
MAJOR OPERATING CONTROLS



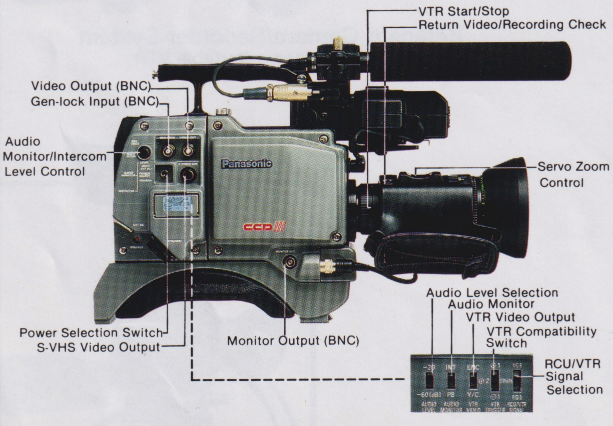
Electret Condenser Microphone
Shutter On/Off
Shutter Speed Selection Switch
Check Button
Brightness
Contrast
Macro Ring
Servo/Manual Zoom Selection
High Gain Selection Switch
White Balance Selection Switch
Colour Bar/−6dB/Camera Selection Switch
Red Gain Control
Blue Gain Control
Total Pedestal Level Control
Detail Hi/Low/Off
Indicator/Zone select
High Band On/Off
Subcarrier Phase Coarse
Subcarrier Phase Fine Control
Horizontal Phase Control
Recording Time Reset
Lens Iris Control



Tally Light
Auto Iris Fine Control
VTR Start/Stop
Auto White/Auto Black Set
Lens Iris Serection



Recording/Tally Indicator
Battery Connector
Audio Monitor Jack (M3)
Intercome Jack (M6)
External DC Input (XLR, 4-pin)
VTR/RCU Connector (32-pin)



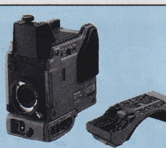
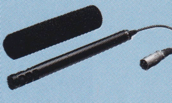
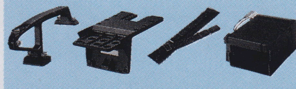
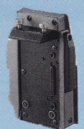
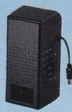
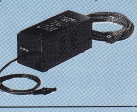
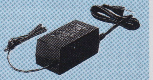
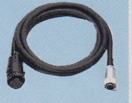
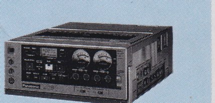
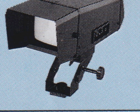
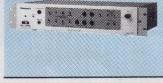
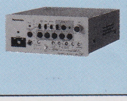
VTR Start/Stop
Return Video/Recording Check
Video Output (BNC)
Gen-lock Input (BNC)
Audio Monitor/Intercom Level Control
Servo Zoom Control
Power Selection Switch
S-VHS Video Output
Monitor Output (BNC)
Audio Level Selection
Audio Monitor
VTR Video Output
VTR Compatibility Switch
RCU/VTR Signal Selection

STANDARD CONFIGURATION

ENG/EFP Colour Camera:	**WV-F250**
•Camera head:	WV-F250H
•Camera adaptor:	WV-AD250
•1.5″ electronic viewfinder:	WV-VF38A
•12× zoom lens:	S12×7.5BRM
•Tripod mounting adaptor:	WV-QT70
•Condenser microphone:	WV-MC35

Dockable Camera:	**WV-F250D**
•Camera head:	WV-F250H
•1.5″ electronic viewfinder:	WV-VF38A
•12× zoom lens:	S12×7.5BRM
•Tripod mounting adaptor:	WV-QT70
•Condenser microphone:	WV-MC35
•S-VHS dockable kit:	WV-DKT70M
•Carrying case:	WV-CC71A

OPTIONAL ACCESSORIES

Camera Head **WV-F250H** 	Camera Adaptor **WV-AD250**
12 Times Zoom Lens **S12×7.5BRM** 	1.5″ Electronic Viewfinder **WV-VF38A**
2/3″ Bayonet Mount Adaptor **WV-LC25** Lens Cable Converter (12P/ 8P) **WV-LC10** 	Condenser Microphone **WV-MC35** 
Tripod Mounting Adaptor **WV-QT70** 	Carrying Case (for WV-F250/AG-7450) **WV-CC71A**
S-VHS Dockable Kit (for AG-7450) **WV-DKT70M** 	MII Dockable Kit (for AU-400) **WV-VT15**
Betacam Adaptor **WV-VT16** 	AC Adaptor/ Quick Charger **WV-PS31**
Battery Pack **WV-PS33** (3.5Ah) **WV-PS60** (1.65Ah) 	Battery Charger **WV-BC30** (for WV-PS33)  **DE-1232** (for WV-PS60) 
Battery Adaptor (for AG-BP212) **WV-AD19** 	S-Video Monitor Cable **WV-CA38** S-Video Cable (4P/4P) **AG-C70A** (3m) **AG-C71A** (5m)
VTR Cable (for S-VHS, 3/4″ VTR) **WV-CA32A/14** S-VHS VTR Extension Cable **WV-CA14×30** (10m) 	VTR Cable (for VHS) **WV-CA32/10** VTR Extension Cable **10H-30AS** (10m) **10H-50AS** (15m) 
S-VHS Portable VTR **AG-7450** 	VHS Portable VTR **AG-6400** 
5″ Electronic Viewfinder **WV-VF65B** 	Lens Control Kit (for S12×7.5BRM) **WV-LK36**
Remoto Control Unit (RCU) **WV-RC36**  **WV-RC37** 	Studio Cable **32A-25** (7.5m) **32A-50** (15m) **32A-100** (30m)

This leaflet is produced for all over the world.
Some accessories may not be available in your country.

The Flexibility That F250 Offers Makes You A Professional.

Panasonic brings you the advanced F250 3CCD Colour Video Camera. Although it is just 1/2 inch, it is provided with a high density CCD of approx. 400,000 picture elements that give a horizontal resolution of 650 lines. And a signal-to-noise ratio of 60 dB (typical) and a high image quality with low smear rate has been realized. Due to its compact size and light weight, low power consumption has been achieved. It also has functions such as a variable electronic shutter and a 6-step gain control. It is further provided with separate Y/C outputs and component outputs that make it compatible with VHS, S-VHS, MII, Betacam, and any type of VTRs. Used separately as a ENG/EFP, CAMERA/RECORDER or as a STUDIO system, it displays superior operability and applicability. The F250 is the great result of Panasonic's advanced technology that fulfills the severe needs of the professional. It opens up a whole new world in image-making.

ENG/EFP Stand-Alone System

S-VHS 625

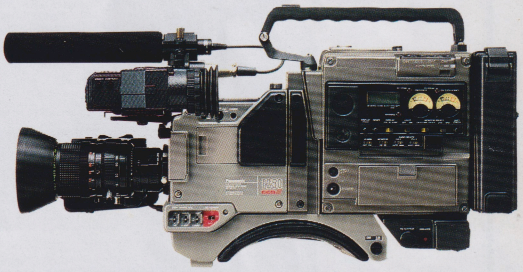
Camera/Recorder System

WV-F250 with S-VHS Portable VTR AG-7450

MII

Camera/Recorder System

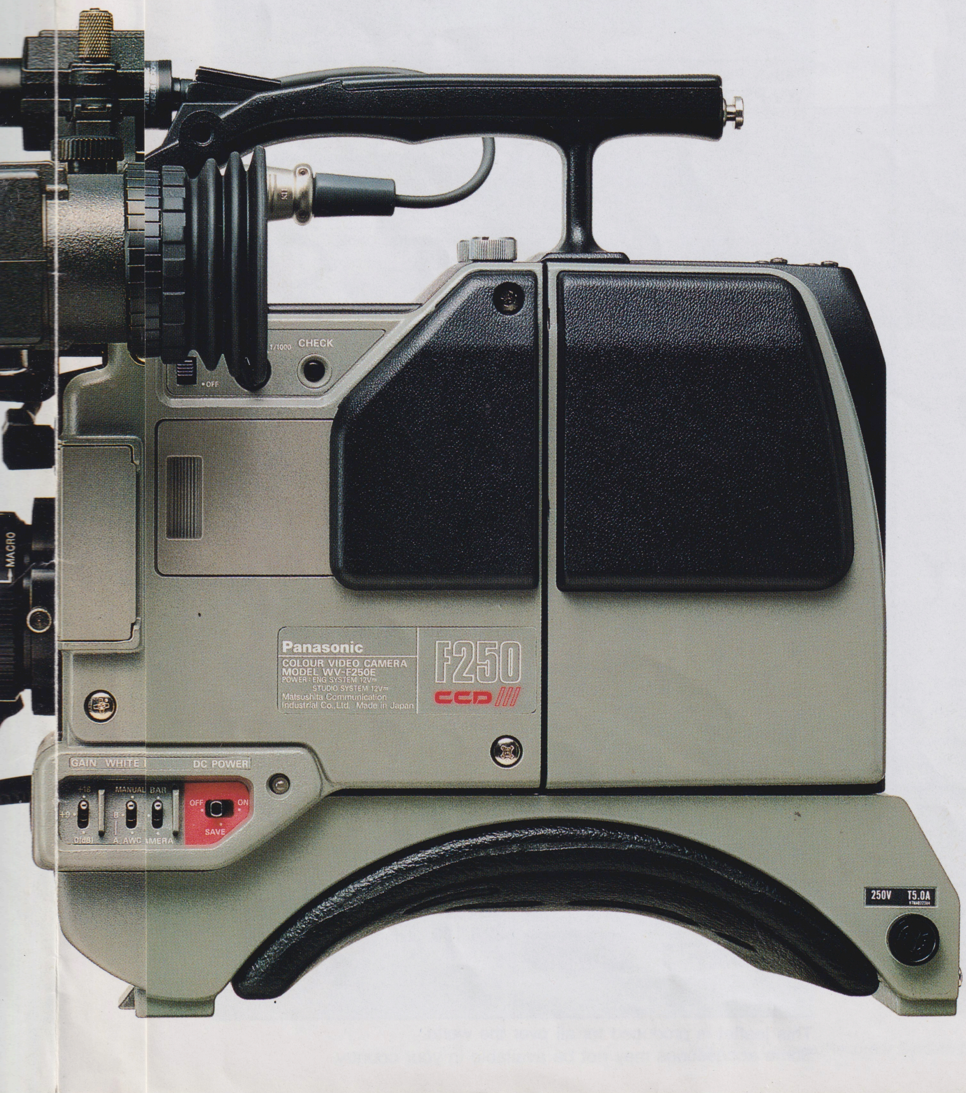
WV-F250 with MII Portable VTR AU-400



Betacam Camera/Recorder System

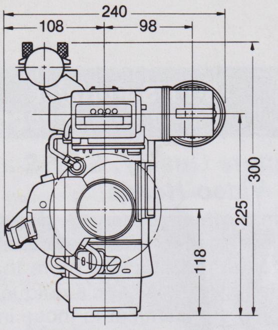
WV-F250 with Betacam Portable VTR

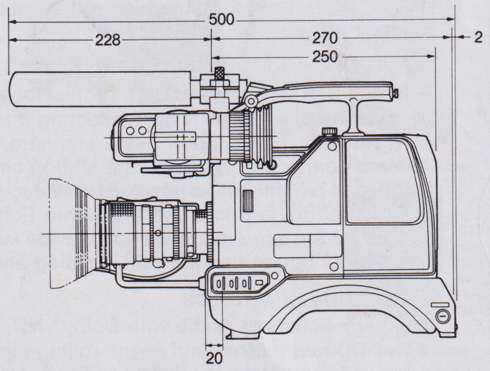
STUDIO System



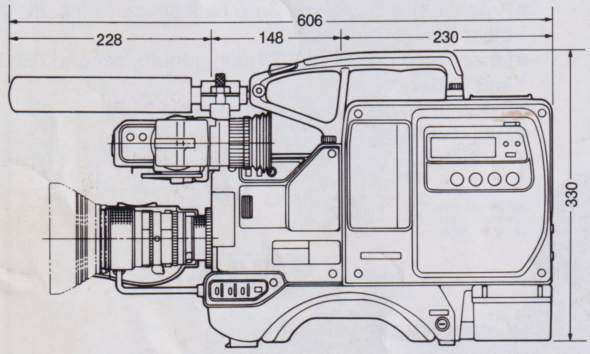
APPEARANCE (unit: mm)

ENG/EFP

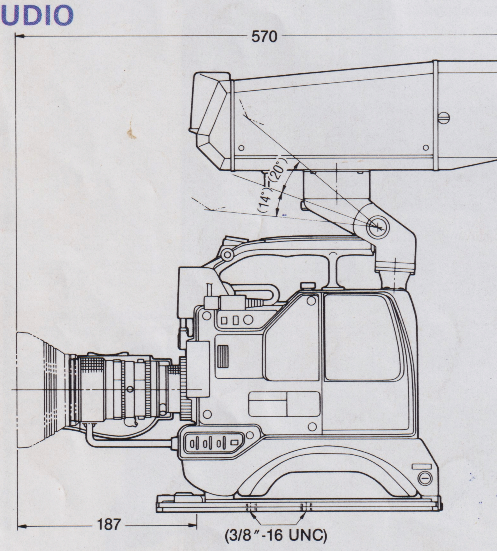




CAMERA/RECORDER



STUDIO



SPECIFICATIONS PAL

3-CCD Colour Video Camera WV-F250

Pick-up System:	Middle index prism system (F1.4)
Image Sensor:	1/2″ interline transfer 3 CCDs Pixels: 681 (Horizontal) × 582 (Vertical)
Scanning Standard:	625 lines, 50 fields, 25 frames
Synchronizing System:	Internal or external (gen-lock), automatically switchable Internal: PAL standard External Input: PAL composite (VBS) signal or black burst signal
Video Outputs:	Five outputs •1.0 Vp-p PAL composite/75 ohms × 2 (BNC connector) 1.0 Vp-p PAL composite/75 ohms (32-pin VTR/RCU connector) •Y/C (S-VIDEO) Output: 1.0 Vp-p Luminance (Y) composite/75 ohms (S-VIDEO connector, 32-pin VTR/RCU connector) 0.3 Vp-p burst level chrominance/75 ohms (S-VIDEO connector, 32-pin VTR/RCU connector) •R/G/B: 0.7 Vp-p/75 ohms × 1 each •Y/PB/PR: Y: 1.0 Vp-p (Sync: 0.3V)/75 ohms PB/PR: 0.525 Vp-p/75 ohms (at EBÚ colour bar) × 1 each •Y/C/B: Y: 1.0 Vp-p (Sync: 0.3V)/75 ohms C: 0.3 Vp-p burst level chrominance/75 ohms B: 0.7 Vp-p/75 ohms
Auxiliary Input:	1.0 Vp-p composite/75 ohms through 32-pin VTR/RCU connector
Audio Input:	MIC: −70 dBm × 1 (9-pin connector)
Audio Output:	−20 dBm or −60 dBm/unbalanced, switchable (32-pin VTR/RCU connector)
Minimum Illumination:	30 lux at F1.4 with +18 dB gain
Signal-to-noise Ratio: (Typical)	60 dB (Detail/Chroma/Gamma Off)
Horizontal Resolution:	650 lines (Y-signal)
Registration:	0.05% (entire picture area, excluding lens)
Detail/Aperture:	Horizontal and vertical (2-line type)
White Balance:	Automatic white balance setting (AWC with two memories) and Manual
Black Balance:	Automatic with pulse canceller
Encoder:	Y, U, V
Colour Bar:	Built-in EBU colour bar generator
Colour Conversion Filters:	3200°K, 5600°K with 12.5% ND, 5600°K, Close
Maximum Cable Length:	VTR Cable: 30 m (no power supply via cable) 10 m (power supply through cable) 32-pin Studio Cable: Max. 300 m with cable compensator
Standard Lens: (S12 × 75BRM)	12:1 auto iris servo control zoom lens, 7.5—90 mm with macro mode, F1.4
Lens Iris:	Automatic or manual
Lens Mount:	Bayonet mount for 1/2″ pickup device
Viewfinder: (WV-VF38A)	1.5″ (1-3/8″ actual image size) electronic viewfinder with character display and zebra level indicator
Power Source:	12 V DC, 5 sources as follows: (1) Battery Pack (2) AC Adaptor (3) External DC source through 4-pin DC connector (4) VTR (external AC adaptor) (5) Remote Control Unit through VTR/RCU connector
Battery Pack Operating Time (Approx.):	1 hour with WV-PS60 2 hours with WV-PS33
Power Consumption (Approx.):	Camera Head 15.6 watts (12 V DC, 1.3A) ENG Configuration 18 watts (12 V DC, 1.5A)
Ambient Operating Temperature:	−5°C— +45°C
Ambient Operating Humidity:	30%—90%
Dimensions:	Camera Head Only (WV-F250H) 146(W) × 262(H) × 170(D) mm ENG Configuration 240(W) × 300(H) × 500(D)mm Studio Configuration 183(W) × 475(H) × 570(D)mm
Weight:	Camera Head only 2.5 kg ENG Configuration 7.3 kg

S-VHS Portable Video Tape Recorder AG-7450

Power Source:	12V DC
Power Consumption:	Approx: 35W with Camera
Television System:	625 lines, 50 fields
Video Recording:	2 rotary heads, helical scanning system Luminance: FM azimuth recording Chrominance: converted subcarrier direct recording
Audio Channel:	4 channels (Normal: 2 channels) (Hi-Fi: 2 channels)
Tape Format:	Tape width 12.7mm (1/2 inch), high density tape/S-VHS Tape
Tape Speed:	23.39mm/sec.
Record/Playback Time:	180 min. with NV-SE180EM
Input Level:	Multiconnector (68p); 1.0 Vp-p, 1.0kΩ unbalanced Audio in (XLR); −6dBs 600Ω balanced
Output Level:	MIC IN (XLR); −60dBs 600Ω balanced Earphone (Mini Jack); −50 ~ −20dB 8Ω unbalanced Video Out (BNC); 1.0 Vp-p 75Ω unbalanced Audio Monitor (phono); −8dBs 800Ω unbalanced
Video Horizontal Resolution:	Colour; more than 400 lines (S-VHS) more than 250 lines (VHS) Monochrome; more than 400 lines (S-VHS) more than 250 lines (VHS)
Audio Frequency Response:	Linear: 50Hz ~ 10kHz Hi-Fi: 20Hz ~ 20kHz
Signal-to-Noise Ratio:	Video: Colour; 45dB (VHS) Monochrome; 45dB (VHS) (with Rohde & Schwartz noise meter TRAP on) Audio: 50dB (with Dolby*NR on) both CH1 and CH2
Audio Dynamic Range:	80dB (Hi-Fi)
Operating Temperature:	0°C ~ 80°C
Operating Humidity:	35% ~ 40°C
Dimensions (W × H × D):	230 × 213 × 117mm
Weight (Approx.):	3.4kg

*"Dolby" and the double-D symbol are registered trademarks of Dolby Laboratories Licensing Corporation.
** "BETACAM" is a trademark of Sony Corpration.

Weight and dimensions shown are approximate.
Specifications subject to change without notice.

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Panasonic is the brandname of Matsushita Electric,

Printed in Japan
[N-326A]

The camera has two VTR start switches, one on the lens and the other on the camera.

Versatile Connectability

The F250 easily connects to several types of VTR's, including S-VHS, VHS, Beta, 3/4″, MII and Betacam models. Connection can be easily mode from the outside.

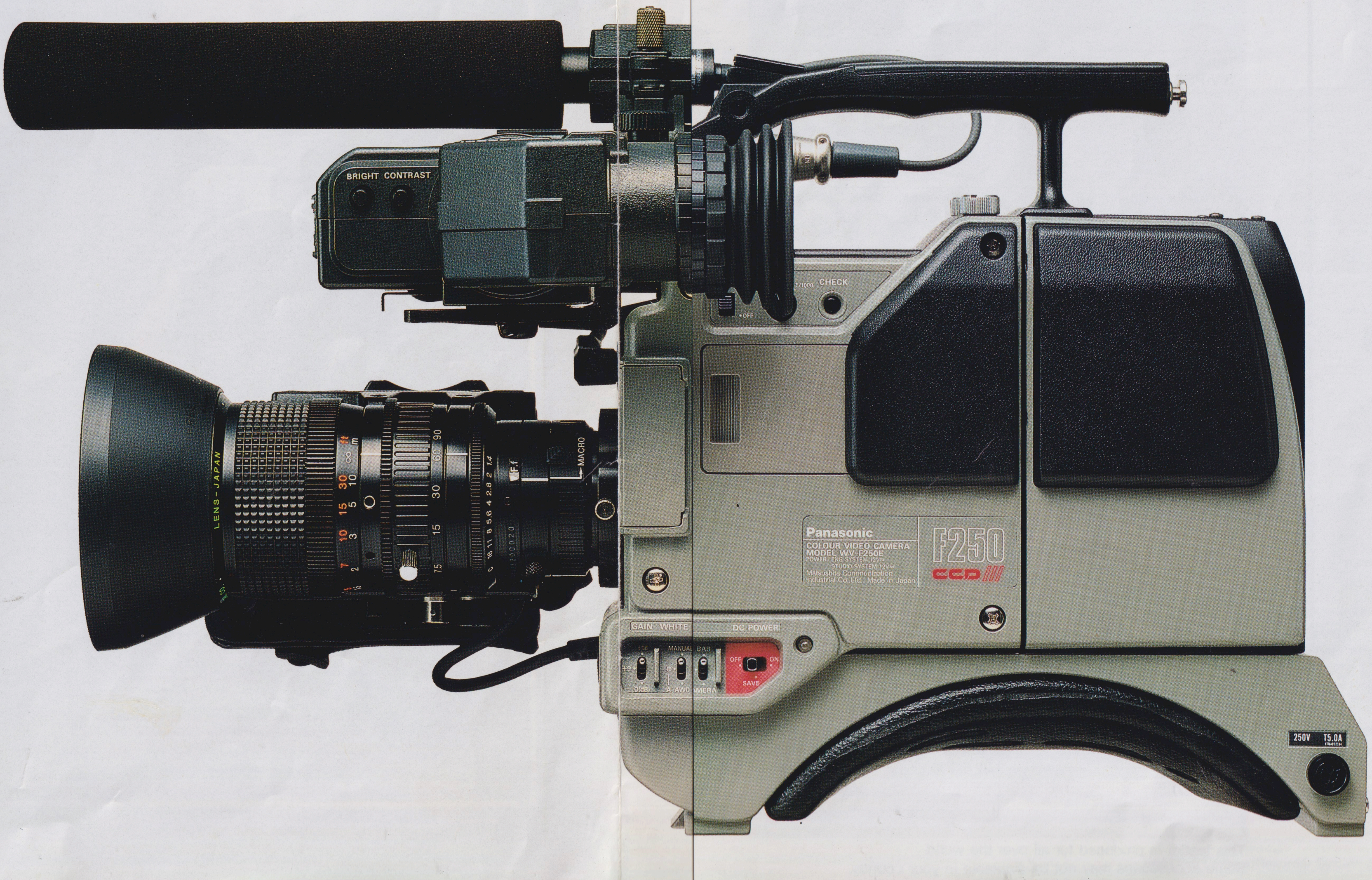
Studio Configuration (with Options)

By using the optional WV-RC36/WV-RC37 Digital Camera Control Unit, the F250 readily becomes a studio camera or a remotely controlled stationary camera.

Additional Features

EBU Standard Colour Bars with Date/Time Display
Two-setting White Balance Memory
Auto Black Balance
Colour Matrix Masking Circuit
Flare Correction Circuit
Iris 1/2 Open/Close Switch

Video Camera. Although it is just 1/2 inch, it is provided with a high density CCD of approx. 400,000 picture elements that give a horizontal resolution of 650 lines. And a signal-to-noise ratio of 60 dB (typical) and a high image quality with low smear rate has been realized. Due to its compact size and light weight, low power consumption has been achieved. It also has functions such as a variable electronic shutter and a 6-step gain control. It is further provided with separate Y/C outputs and component outputs that make it compatible with VHS, S-VHS, MII, Betacam, and any type of VTRs. Used separately as a ENG/EFP, CAMERA/RECORDER or as a STUDIO system, it displays superior operability and applicability. The F250 is the great result of Panasonic's advanced technology that fulfills the severe needs of the professional. It opens up a whole new world in image-making.


BRIGHT CONTRAST
CHECK
MACRO
LENS-JAPAN
Panasonic
COLOUR VIDEO CAMERA
MODEL WV-F250E
Matsushita Communication Industrial Co.,Ltd. Made in Japan
F250
CCD
GAIN WHITE
MANUAL BAR
A AW CAMERA
DC POWER
OFF ON
SAVE
250V T5.0A